

Agricultural Beet

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Importance of Pre-Emergence Herbicides in Sugar Beets

With spring planting just around the corner it is necessary to underline the importance of using a pre-emergence herbicide in our sugar beet crop. In recent years we have seen an increased use of pre-emergence herbicides as well as row cultivation. These are important tools to combat waterhemp as we lack post-emergence herbicide options with increasing glyphosate resistance. Growers that use a pre-emergence herbicide in the sugar beets are more likely to have good weed control than growers that do not use a pre-emergence herbicide (Figure 1). For the best chance at having great weed control follow a pre-emergence application with a split lay-by program beginning after the sugar beets reach 2 true leaves.

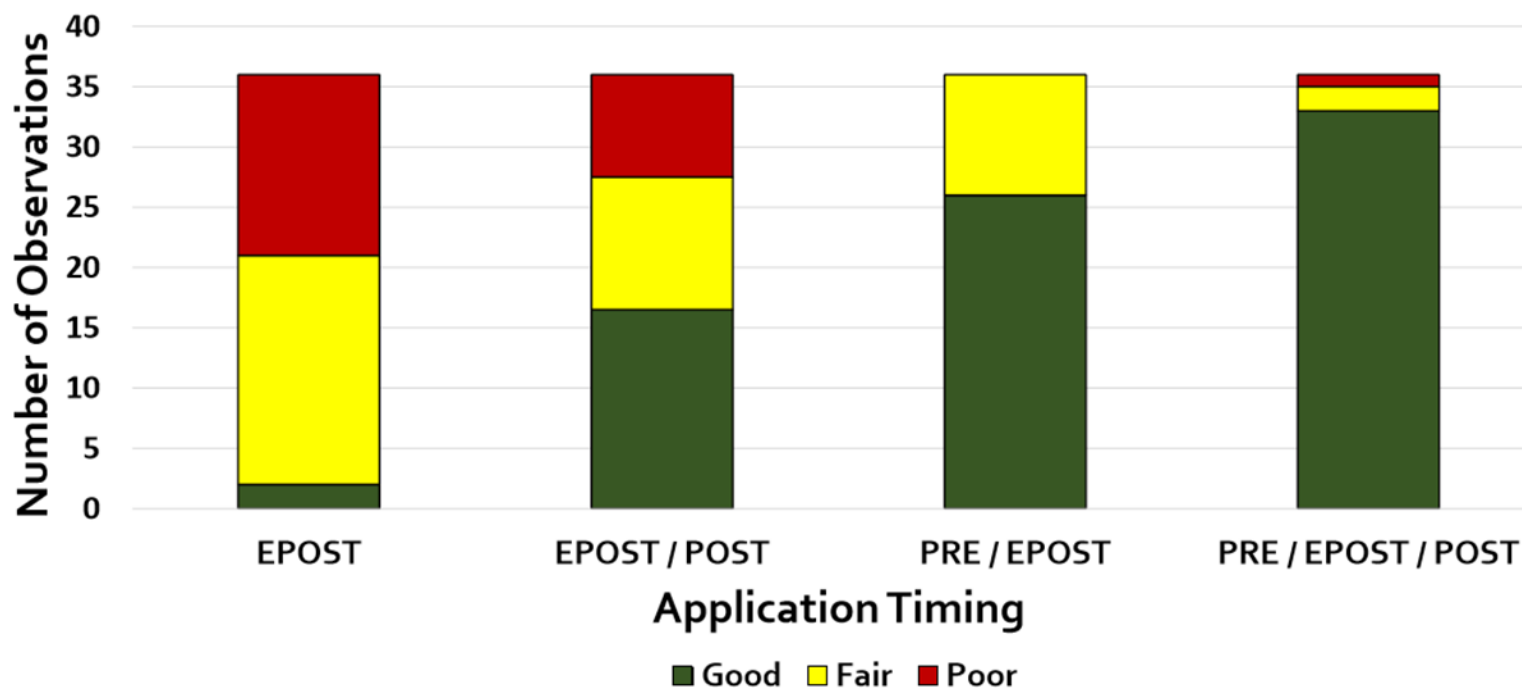


Figure 1: Experiment considered herbicide treatment combination (S-metolachlor, Warrant, and Outlook) and timing (lay-by, split lay-by, PRE fb lay-by, and PRE fb split lay-by) for waterhemp control. Clusters were titled 'good', 'fair' and 'poor' since treatments in the good cluster generally corresponded to > 80% waterhemp control, the fair cluster corresponded to 65-80% control, and the poor cluster corresponded to 40-65% control. This is a summary of 36 observations from field experiments near Herman, Lake Lillian, and Moorhead, MN and near Galchutt, ND in 2014, 2015 and 2016.



Unfortunately, the wet spring last year prevented some growers from getting a pre-emergence herbicide applied and that had severe negative consequences in fields that had high levels of waterhemp pressure. The picture above shows the benefit of applying a full rate of Ethofumesate around the field border. However, the rest of the field was a weed control disaster since no pre-emergence herbicide was applied.

Herbicide Treatment	Rate	Comments
Ethofumesate (Nortron, Ethotron, and Ethofumesate 4SC)	5 to 7.5 pt/A	Does not allow for the use of a nurse crop. Needs 0.75 inches of rain to activate.
Dual Magnum	8 to 12 oz/A	Rate based on soil organic matter. Needs 0.5 inches of rain to activate. Indemnification form needed. Go to https://www.syngenta-us.com/labels/indemnified-label-login and log in to complete indemnification form.
Dual Magnum + Ethofumesate	0.5 pt/A + 2pt/A	Go to https://www.syngenta-us.com/labels/indemnified-label-login and log in to complete indemnification form.

- It is possible to see stature reduction in sugar beets when using these pre-emergence programs. However, sugar beet will recover from this early season injury and not affect extractable sugar per acre, but it will not recover from waterhemp competition.
- Remember that application volume is important to achieve adequate coverage and prevent weed escapes. Heavy corn residue can be an accomplice in allowing weed escapes.
- We have no post emergence options for waterhemp control in sugar beet. Getting pre-emergence herbicides applied in a timely manner is essential for good weed control.
- Contact your agriculturist with any questions concerning your weed control program.

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Information Credit:
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